

UNITED STATES DISTRICT COURT  
NORTHERN DISTRICT OF CALIFORNIA

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METRO FUEL LLC, a Delaware limited  
liability company,

No. C07-6067 JSW

Plaintiff,

vs.

CITY OF SAN FRANCISCO, a municipal corporation,  
COUNTY OF SAN FRANCISCO, a subdivision of the  
State of California, CITY AND COUNTY OF SAN  
FRANCISCO, a chartered California city and county.

Defendants.  
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**REPLY DECLARATION OF JERRY WACHTEL**

JERRY WACHTEL declares under penalty of perjury, pursuant to 28 U.S.C. §  
1746, that the following is true and correct:

1. I submit this Reply Declaration in further support of the motion by Plaintiff Metro Fuel LLC ("Fuel") for a preliminary injunction.
2. I understand that the City of San Francisco (the "City") has objected to the analysis contained in my initial Declaration dated July 17, 2008, claiming that my analysis does not "meet[] the minimum standards of reliability" necessary for admission into evidence. I strongly disagree.
3. First, let me clarify what my analysis did and did not attempt to prove.
4. It has been explained to me that the issue to be resolved by the Court in this case is whether the City's justifications for prohibiting Fuel's panel signs are constitutionally sufficient. The City has asserted that one of its regulatory justifications is traffic safety – *i.e.*,

that Fuel's signs have an unacceptably high potential to cause driver distraction, and thus an unacceptably high potential to cause automobile accidents. My understanding is that the City is not contending that Fuel's panel signs necessarily or inevitably will cause automobile accidents, but rather simply that the risk of causing accidents posed by Fuel's panel signs is too high.

5. Accordingly, I was asked to examine the City's street furniture advertising signs and to perform a *relative* analysis: compared with the risk of distracting drivers that could lead to accidents posed by Fuel's panel signs, do the City's street furniture advertising signs pose a smaller, equal, or greater risk of such distraction? I never attempted to prove that the City's signs are "dangerous" in that they necessarily *will* cause accidents, just as I never attempted to prove that Fuel's signs are "safe" in that they necessarily *will not* cause accidents. I simply analyzed the relative *potential* of each party's signs to cause undue distraction that could potentially lead to accidents.

6. My ultimate conclusion, as reflected in my initial Declaration, was that the City's street furniture signs generally have at least as much potential to distract drivers and potentially lead to accidents as Fuel's signs do.

7. The analysis that led me to this conclusion was premised on a body of well-recognized, generally accepted, peer-reviewed scientific literature. This literature, which is firmly accepted in the scientific community, teaches us the following scientific facts.

8. First, other factors held constant, the larger that the image of an object is on the retina, the more attention-getting that object will be. Thus, for two advertising signs of equal size, the sign that is closer to the driver will capture attention the most, thereby causing greater potential for distraction. This principle is established by the following peer-reviewed scientific literature: FHWA (2003).

9. Second, objects that are closer to the centerline of a driver's vision (often called the line-of-sight, or the cone of vision, or the focus of expansion) are more likely to be fixated as the driver approaches them than objects that are further to the periphery of the driver's visual field, thereby causing greater potential for distraction. This principle is established by the following peer-reviewed scientific literature: Beijer (2002).

10. Third, other factors held constant, an advertising sign that is illuminated will be more attention-getting than a sign that is not, thereby causing greater potential for distraction. This principle is established by the following peer-reviewed scientific literature: Farbray, Wochinger, Shafer, Owens and Nedzesky (2001).

11. Fourth, other factors held constant, advertising signs located in a position elevated above a driver's line of sight are less likely to capture a driver's attention when the driver must be attending to demanding traffic situations, and therefore have less potential to cause distraction under these conditions. This principle is established by the following peer-reviewed scientific literature: Crundall, Van Loon & Underwood (2006).

12. Fifth, traffic situations in which a driver is looking away from the forward roadway for even a brief period of time (0.75 – 2.0 seconds) are associated with a far greater risk of crash than situations in which the driver's eyes are not distracted by such stimuli. This principle is established by the following peer-reviewed scientific literature: Smiley, Smahel, & Eizenman (2004), Horrey and Wickens (2007), Dingus, Klauer, Neale, Petersenm, Lee, Sudweeks, Perez, Hankey, Ramsey, Gupta, Bucher, Doerzaph, Jermeland & Knipling (2006).

13. These basic principles have been the subject of extensive scientific study, have been demonstrated through scientifically valid experimental methodologies, and are not

controversial in the human factors and traffic safety community. They also are consistent with common sense.

14. With these principles as my premise, I sought to determine, as described above, whether the City's street furniture signs have a greater, equal, or lesser potential to distract drivers and potentially lead to accidents than Fuel's panel signs.

15. To make this determination, I engaged in the field study that is described extensively in my initial Declaration. The purpose of my field study was simply to observe a sample of the City's street furniture signs and Fuel's panel signs as they exist and are encountered in normal traffic conditions, to measure distances between the signs and the adjacent streets, to measure the signs' height above grade, and to make observations regarding the presence of illumination.

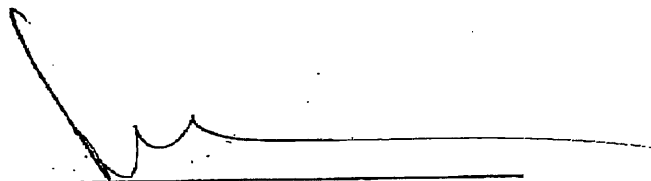
16. Having taken these measurements and made these observations during my field study, I then applied these facts to the basic scientific principles described above. My conclusion was driven primarily by the facts that most of the City's street furniture signs are at least as large as Fuel's panel signs, that all of the City's street furniture signs are located closer to the roadway than Fuel's panel signs, and, therefore, closer to the drivers' line of sight; that all of the City's street furniture signs are closer to grade than any of Fuel's panel signs; and that many of the City's street furniture signs are illuminated, whereas none of Fuel's panel signs are. These observations resulted from careful measurements, each of which was repeated twice.

17. I would only add that, far from being unusual, unreliable, or unscientific, I and others routinely use field studies like this to compare actual measurements and observations against the criteria developed through, and reported in the scientific research. Without a field study to take such measurements and make such observations, it obviously would not be possible

to relate the findings of relevant research to the actual conditions "on the ground." It is field studies of the type that I performed in this case which enables this relationship to be understood and explained.

18. Finally, I would like to emphasize that I harbor no favoritism for one side or the other in this case. Although I am being compensated for my time in this case, much – indeed, the majority – of my service as an expert witness in litigation has been on behalf of government entities, not plaintiffs. If my findings had led me to the conclusion that Fuel's signs had greater potential to cause driver distraction than the City's signs, I certainly would not have hesitated to report that result.

Dated: September 12, 2008  
Oakland, California



JERRY WACHTEL

## REFERENCES

Beijer, D.D. (2002). *Driver distraction due to roadside advertising*. University of Toronto, Department of Mechanical and Industrial Engineering.

Crundall, D., Van Loon, E., & Underwood, G. (2006). Attraction and distraction of attention with roadside advertisements. *Accident Analysis and Prevention*, 38 (4), 671–677.

Dingus, T. A., Klauer, S. G., Neale, V. L., Petersen, A., Lee, S. E., Sudweeks, J., Perez, M. A., Hankey, J., Ramsey, D., Gupta, S., Bucher, C., Doerzaph, Z. R., Jermeland, J., and Knipling, R.R. (2006). *The 100-Car Naturalistic Driving Study: Phase II – Results of the 100-Car Field Experiment*. (Report No. DOT HS 810 593). Washington, D.C.: National Highway Traffic Safety Administration.

Farbry, J., Wochinger, K., Shafet, T., Owens, N. and Nedzeskym, A. (2001). *Research review of potential safety effects of electronic billboards on driver attention and distraction (Final Report)*. Washington, DC: U.S. Department of Transportation, Federal Highway Administration, Human Centered Systems Team.

FHWA (2003). *Manual on Uniform Traffic Control Devices for Streets and Highways*. Washington, DC: U.S. Department of Transportation, Federal Highway Administration.

Horrey, W.J., and Wickens, C.D. (2007). In-vehicle glance duration: Distributions, tails and a model of crash risk. *Proceedings of the 2007 Transportation Research Board Meeting*. Washington, DC: TRB.

Smiley, A., Smahel, T., and Eizenman, M. (2004). Impact of Video Advertising on Driver Fixation Patterns. *Transportation Research Record: Journal of the Transportation Research Board*, No. 1899, pp. 76-83. Washington, DC: TRB.